

ABSTRACT

A method for copying data and a data storage system including a primary data storage system and a remote data storage system stores data and copies data between the primary and remote systems with enhanced performance. The primary data storage system includes a primary data storage volume, and primary snapshots comprising data stored at the primary volume since a previous primary snapshot. The remote system includes a remote volume comprising a pointer to one or more remote snapshots, the remote snapshots corresponding to the primary snapshots. In the event of a failure at the primary system, the remote volume is made into a new primary volume and data from the remote snapshots is used for read and write operations in place of the primary volume. When the primary volume recovers from the failure, the new primary volume may be resynchronized with the primary volume.